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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/803,660
Filing Date: March 18, 2004
Appellant(s): BAUCHOT, FREDERIC

MAILED

JUL 18 2007

Technology Center 2100

Velel Emile
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/22/2007 appealing from the Office action mailed 09/26/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5317686	Salas et al	5-1994
6057837	Hatakeda et al	5-2000

MATHCAD, MathSoft Inc., published: August 1999, pages 140-141

Hashemi, US 2003/0212804 A1, published: Nov. 13, 2003, filed: May 9, 2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

<u>Claims 1-4, 6, 8 and 12 – 19</u>

Claims 1-4, 6, 8, 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salas et al (US Patent: 5,317,686, published: May 31, 1994) in further view of Hatakeda et al (US Patent: 6,057,837, published: May 2, 2000, filed: Jul. 15, 1997).

With regards to claim 1, Salas et al teaches a method for data entry into the content of cells belonging to an output field, said data being expressed as a mathematical expression of the cell contents of at least one input field in a data multidimensional table used by a data management application, said table comprising cells arranged as a grid of records and fields, each cell corresponding to the intersection of one record with one field, each cell being identified by a cell address and comprising a cell content, said table having one specific record in which each cell content is entered as a unique character string label identifying each table field, said method comprising the steps of:

a) *Entering labels corresponding to the at least one input field and a label corresponding to the output field, said later label being expressed as the mathematical expression of said labels of said at least one input field* (column 8, lines 6-26: whereas, each cell is identified by a cell name/label, and mathematical expressions are expressed for a cell, using values from other cells (input cells)). Furthermore, the mathematical expressions assigned for an output field comprise one or more labels assigned to one or more input fields (Fig. 4a, reference number 45).

b) *Parsing the label of the output field into a mathematical expression by identifying the numeric operands, the operators and the at least one existing input field label* (column

12, lines 35-57, Fig. 4a, reference number 45: whereas, item names/input labels are parsed in the mathematical expression, along with "numeric values, textual values, reference notations, and mathematical operators/functions").

c) *Translating in the mathematical expression, the at least one existing input field label into the address of the cell containing the at least one input field label* (columns 15 and 16, lines 63-68 and 1-4 respectively: whereas, the textual address of a cell (input field label) is translated into an address of the cell (index map address).)

d) Pasting the result of the mathematical expression used for the output field(s), from values of input cell(s) belonging to the same record (Fig. 4a: whereas, the values computed in an output cell are derived from each record's input cell value. For example, each record is represented by the "box" formed by intersecting the 'Sports' category and the 'Ford' category).

However, although Salas et al teaches translating labels for an input cell for a particular record as explained above, Salas et al does not teach for each cell of the output field, *pasting in the cell content the translated mathematical expression and replacing in said pasted mathematical expression each cell address of the at least one input field label by the cell address of the at least input field belonging to the same record.*

Hatakeda et al teaches for a *pasting in the cell of an output field, a mathematical expression* showing *each cell address of* at *least one input field belonging to a same record* (Fig. 3d, reference number 102').

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Salas et al's method for parsing a mathematical expression and translating input field labels for each record to further use the same data to paste a mathematical expression containing input field addresses for a particular record as taught by Hatakeda et al. The combination of Salas et al and Hatakeda et al would have allowed Salas et al to have reduced "the labor involved in editing references in cell data" (column 5, 1-2).

With regards to claim 2, which depends on claim 1, Salas et al teaches a method for *replacing the output field cell contents by the computed mathematical expression applied to the cell contents corresponding to the cell addresses of the at least input field belonging to the same record*, as similarly explained in claim 1, and is rejected under the same rationale.

With regards to claim 3, which depends on claim 1, Salas et al teaches a method for *repeating the preceding steps to compute the content of the cells of any additional output field in the table, wherein said content can be expressed as a mathematical expression of the cell contents of at least one input field* (Fig. 4a: whereas, there are multiple records that also use the mathematical expression in reference number 45. All these records are shown to have been computed, and thus as shown, the steps for computing have been repeated for multiple output cells as well).

With regards to claim 4, which depends on claim 1, Salas et al teaches a method wherein *the step of parsing the label includes a transformation of cell content type from a character string into a computable mathematical expression* (Fig 4a: whereas, a

character string from the output label (reference number 28), is parsed to determine the validity of the expression (column 12, lines 12-14), and also broken down into a computable mathematical expression by "combining numeric values, textual values, reference notations, and mathematical operators/functions" and stored into appropriate output cells (column 12, lines 46-53)).

With regards to claim 6, which depends on claim 1, Salas et al teaches a method *further comprising an initial step of selecting the input and output fields forming the data multidimensional table in a larger data multidimensional table* (column 10, lines 49: whereas, the selection of input and output fields selected/referenced by using an expandable referencing scheme, such that the input/output fields can be selected in a larger multidimensional table).

With regards to claim 7, which depends on claim 1, Salas et al teaches a method wherein *after the step of entering labels, the following steps are executed only if a further step of starting computation of the cell contents of the output field is triggered* (column 18, lines 29-34: whereas, the computation of cell contents are triggered when the "structure of dimensions, the number of dimensions, or any user-supplied mathematical expressions are changed by the user, the math module is invoked" to compute the cell contents of affected output cells).

With regards to claim 8, which depends on claim 1, Salas et al teaches a method wherein *the fields and records are respectively the columns and rows if the data multidimensional table is vertically arranged or are respectively the rows and columns when the data multidimensional table is horizontally arranged* (Fig. 3a).

With regards to claim 12, Salas et al teaches a computer program product comprising:

Code means for entering a first label into the at least one input column and a second label into the at least one output column, the second label being, a mathematical expression that includes the first label and at least one operator: (column 8, lines 6-26: whereas, each cell is identified by a cell name/label (*into an input column*, since the cell resides within the input column), and mathematical expressions are expressed for an output cell, using values from other cells (input cells)). Furthermore, a second label comprising mathematical expressions are assigned for an output field (*into an output column,* since the cell/output field resides within the output column), which further comprise one or more labels assigned to one or more input fields (Fig. 4a, reference number 45:whereas, there are at least two input columns, and a mathematical expression can reference cells from more than one input column). Additionally, item names/input labels are parsed in the mathematical expression, along with "numeric values, textual values, reference notations, and mathematical operators/functions" (column 12, lines 35-57, Fig. 4a, reference number 45).

Code means for automatically entering data into the second row at a location under the second label upon entry of data by a user into the second row at a location under the first label, the data automatically entered being a result of a mathematical operation as defined by the mathematical expression in the second label wherein the data entered by the user replaces the first label in the mathematical expression (Fig. 5a: whereas, the second label 'Total" comprises a mathematical expression for summing all input cells for

each record, and the result data is entered below the second label. Furthermore, "the particular value stored in a cell can be specifically supplied by the user or computed as directed by user supplied mathematical expressions" (column 8, lines 15-26: whereas, the mathematical expression includes values from input columns, as also shown in Fig 4a). Lastly, the value supplied by the user in an input field is used in place of the label of the cell in the mathematical expression *(columns 15 and 16, lines 63-68 and 1-4 respectively: whereas, the textual address of a cell (input field label) is translated into an address of the cell (index map address)*, to automatically calculate the output values shown in Fig. 5a.)

With respect to claim 13, which depends on claim 12, Salas et al teaches *wherein when the table has two or more input columns, two or more labels are used to define the two or more input columns, the second label, as a mathematical expression, includes the two or more labels such that when the user enters data into the second row at a location under the two or more labels, the data automatically being entered into the second row at a location under the second label is a result of a mathematical operation as defined by the mathematical expression in the second label*, as similarly explained in the rejection for the claim 12, and is rejected under the same rationale.

With respect to claim 14, which depends on claim 12, Salas and teaches:

- *Code means for parsing the second label to identify operands, and the at least one operator of the mathematical expression*, as similarly explained in the rejection for claim 1, and is rejected under the same rationale.

- *Code means for translating the mathematical expression into code, as similarly explained in the rejection for claim 1*, and is rejected under the same rationale.
- *Code means for entering the code, into which the mathematical expression is translated, into the second row at a location under the second label before data is entered into the table*, as similarly explained in the rejection for claim 1, and is rejected under the same rationale.

With respect to claim 15, which depends on claim 14, Salas and Hatekeda et al teaches wherein data is automatically entered into the second row at the location under the second label when triggered to do so, as similarly explained in the rejection for claim 1 (since the data entered in the second row is entered upon user request for viewing data), and is rejected under the same rationale.

With regards to claim 16, for a system performing a method similar to the method of claim 1, is rejected under the same rationale.

With regards to claim 17, which depends on claim 16, for a system performing a method similar to the method of claim 13, is rejected under the same rationale.

With regards to claim 18, which depends on claim 15, for a system performing a method similar to the method of claim 1, is rejected under the same rationale.

With regards to claim 19, which depends on claim 18, for a system performing a method similar to the method of claim 15, is rejected under the same rationale.

(10) Response to Argument

With regards to claims 1 and 12, the appellants argue that, Salas et al does not teach the stop of <u>entering labels corresponding to the at least one input field and a label</u>

corresponding to the output field, said later label being expressed as the mathematical expression of said labels of said at least one input field as claimed. The appellant further argues that rather, Salas advocates splitting a screen in two portions, a table portion and a calculation portion. However, the examiner respectfully disagrees with the arguments, since the claim language does not require the screen where the input and output fields reside; to reside in the same portion. Additionally, the claim language does not require that the output label(s) need to be displayed in the same portion of a screen. In the case of Salas, the output label, such as 'Net' in Fig. 4a, is shown in a screen, and the output label 'Net' is also shown in further detail (mathematical expression-wise), in the calculation portion of the screen (reference number 45 of Fig. 4a). Thus, the applicant's arguments are not persuasive, since the teachings of Salas et al still fall within the scope of the claimed language. As further detailed in column 12, lines 45-57, and in reference numbers 30, 28, and 45 of Fig. 4a of Salas; The output label corresponds to at least one input field (ref 28 of Fig. 4a), and a label corresponding to the output field (ref 30 of Fig. 4a), said later label being expressed as the mathematical expression of said labels of said at least one input field, as shown using an '=' operator, and also shown in Fig. 4b, whereas multiple mathematical operators include '-' and '*'. Thus, since Salas et al still falls within the scope of claimed invention, the Examiner respectfully maintains that Salas (in combination with Hatakeda et al, as explained in the previous office action, and also in the rejection above), still reads on the claimed invention.

Secondly, with respect to claims 1 and 12, the Appellant argues that since Salas et al does not teach the step of _entering labels corresponding to the at least one input field and a label corresponding to the output field, said later label being expressed as the mathematical expression of said labels of said at least one input field,_ then Salas et al does not teach the steps of _parsing the label of the output field into a mathematical expression by identifying numeric operands, operators and the at least one existing input field label._ However, the examiner respectfully disagrees with the appellant's argument since the examiner has explained/shown that Salas et al teaches the claimed _entering labels corresponding to the at least one input field and a label corresponding to the output field, said later label being expressed as the mathematical expression of said labels of said at least one input field_. Additionally, the examiner points out to the Appellant, that Salas et al inherently teaches the acting of parsing the label of the output field into a mathematical expression by identifying numeric operands, operators, and the at least one existing input field label since as shown in Fig. 4a and Fig. 4b, and taught in column 12, lines 45-57, the output label represented as a mathematical expression (ref 45) is computed/processed to determine the result of the expression, and thus since the expression is evaluated, it is also parsed. Therefore, the examiner respectfully maintains that Salas (in combination with Hatakeda et al, as explained in the previous office action, and also in the rejection above), still reads on the claimed invention.

Third, with respect to claims 1 and 12, the Appellant argues that "By contrast, Salas et al advocate(s) putting the mathematical expressions in a specific section, where entries in that section are interpreted as mathematical expressions … thus, there is no need for

Salas et al to teach the parsing step". However, the examiner respectfully disagrees with the appellant's argument since, as pointed out by the appellant, the entries in that section (mathematical expressions section), are *interpreted*. Thus, as explained previously by the examiner, and in column 12, lines 45-57 of Salas et al, since the mathematical expressions are computed/processed (or interpreted), then the expression has been parsed; therefore Salas et al teaches the purpose of the parsing step is to evaluate the expression to determine an output (column 12, lines 45-57). Additionally, the appellant is arguing that the mathematical expressions of Salas et al are in a specific section. However, the examiner respectfully points out to the appellant that the claim language does not limit the mathematical expressions to be in a specific section, thus the appellant's argument is not persuasive.

Fourth, with respect to claim 1 and 12, the Appellant argues that since Salas et al does not teach "the step of entering labels expressed as mathematical expressions for the output fields and the step of parsing the labels etc", then the combination of the teachings of Salas et al. with those of Hatekada et al, do not teach the claimed invention. However, the examiner respectfully disagrees since the examiner has explained above, the Salas et al teaches "the step of entering labels expressed as mathematical expressions for the output fields and the step of parsing the labels etc".

Claim 4

With regards to claim 4, the Appellant argues that "By contrast, Salas et al. advocates putting the mathematical expressions in a specific section, where entries in that section are interpreted as mathematical expressions. Thus there is no need for Salas et al to

teach the parsing step. However, the examiner respectfully disagrees, since Salas et al has been shown the need/reason to parse labels and expressions, as explained in the response to argument of claim 1 and 12 above.

Claim 16

With regards to claim 16, the Appellant argues that "Salas et al does not teach, show or suggest *using a label expressed as a mathematical expression that includes another label to label a column in a table and at least one operator.* However, the examiner respectfully disagrees, and further points out in Fig. 5a, a label ('Total') is expressed as a mathematical expression ('Sum (Vehicle)'), that includes another label ('Vehicle') to label a column in a table Fig. 5a (whereas a column is labeled 'Total'). Additionally, as explained in column 12, lines 45-57, and shown in Fig. 4b of Salas et al, the mathematical expressions can contain operators such as '*' or '-'. Thus, the applicant's argument is not persuasive.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

STEPHEN HONG
SUPERVISORY PATENT EXAMINER

Wilson Tsui

Patent Examiner

July 11, 2007

Wilson Tsui 07/11/07

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